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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,851	08/09/2006	Norihiko Amikura	294821US26PCT	1998
22850	7590	06/29/2010	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER
			1716	
			NOTIFICATION DATE	DELIVERY MODE
			06/29/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/588,851	<b>Applicant(s)</b> AMIKURA ET AL.	
	<b>Examiner</b> KARLA MOORE	<b>Art Unit</b> 1716	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>0110</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 21 January 2010 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. No list has been provided. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,076,205 to Vowles et al. in view of U.S. Patent No. 5,758,680 to Kaveh et al. and U.S. Patent No. 7,032,614 to Lappen et al.

5. Vowles et al. disclose a semiconductor processing apparatus substantially as claimed and comprising: a common transfer chamber (16 and/or 18); a plurality of processing chambers (26, 28,30) connected to the common transfer chamber for processing a substrate; a transfer mechanism (34) disposed within the common transfer chamber for transferring the substrate with respect to the processing chambers; and a plurality of gas supply systems for supplying predetermined gases the gas supply systems being provided at the processing chambers respectively; and a gas box (50) for enclosing the gas supply systems.

6. However, Vowles et al. fail to explicitly disclose the details of the gas supply systems, for example the gas supply systems including: a primary side connection unit connected to gas sources of the predetermined gases, the primary side connection unit being disposed underneath the corresponding one of the processing chambers; and a flow rate control unit for controlling the flow rates of the predetermined gases, the flow

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rate control unit being disposed on gas lines through which the gases are supplied from the primary side connection unit to the corresponding chamber, and the flow rate unit being disposed above the primary side connection unit so as to at least partially overlap therewith.

7. Kaveh et al. disclose a processing apparatus, in Figures 1 and 2, comprising: a processing chamber (multiple structures that support processing, which may be located inside or outside of the actual processing area; e.g., 106, 108, 110, 112 and 130); and a gas supply system (128) provided at the processing chamber for the purpose of introducing process gases into the processing chamber, wherein the gas supply system, includes: a primary side connection unit (138) connected to gas sources of the predetermined gases the primary side connection being disposed underneath the corresponding one of the processing chambers; a flow rate control unit (142) for controlling the flow rates of the predetermined gases, the flow rate control unit being disposed on gas lines through which the gases are supplied from the primary side connection unit to the corresponding chamber, the flow rate unit being disposed above the primary side connection unit so as to at least partially overlap therewith.

8. It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have provided a gas supply system as detailed above in Vowles et al. in order to introduce gases into the processing chamber as taught by Kaveh et al.

9. Vowles et al. and Kaveh et al. disclose the apparatus substantially as claimed and as described above.

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10. However, Vowles et al. in view of Kaveh et al. fail to disclose a the gas box having a cover removably detached thereto for providing access to the flow rate control unit.

11. Lappen et al. disclose the provision of a gas box comprising a removably detached cover for the purpose of selectively opening (i.e. providing access to the inside thereof) and closing the gas box (see, e.g. 17, rows 1-7).

12. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the gas box of Vowles et al. in view of Lappen et al. with a removably detached cover in order to selectively open and close the gas box as taught by Lappen et al.

13. With respect to Claim 3, in Vowles et al., the gas supply system (and therefore all structures provided therein) is disposed on a floor of a room in which the apparatus is installed. See, e.g., Figure 2.

14. With respect to claims 5 and 6, which are drawn to the arrangement of aforementioned structure, the courts have ruled that the mere rearrangement of parts which does not modify the operation of a device is prima facie obvious. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

15. With respect to claim 7, in Kaveh et al. the flow rate control unit is provided with a flow rate controller (e.g., 160; also see, e.g., column 5, rows 23-53) for monitoring pressures in the gas lines to control the flow rates of the predetermined gases, respectively.

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16. With respect to claim 8, in Vowles et al., each of the processing chambers (26, 28 and 30) and associated structure are constructed to be substantially the same.

17. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vowles et al. and Lappen et al. as applied to claims 1, 3 and 5-8 above, and further in view of U.S. Patent No 5,441,076 to Moriya et al.

18. With respect to claim 2, Vowles et al. and Lappen et al. disclose the apparatus substantially as claimed and as described above.

19. However, Vowles et al. and Lappen et al. fail to disclose the primary side connection unit and the flow rate control unit are detachably connected to each other through trunk pipelines constituting part of the gas lines.

20. In Figures 1-7, Moriya et al. teach the use of trunk pipeline (150 or 160) for detachably connecting a primary side connection unit (e.g. 28a) and a flow rate control unit (e.g. 40) for the purpose of arbitrarily selecting gas inlets and outlets in accordance with request and for the purpose facilitating maintenance (column 8, row 43 through column 9, row 2).

21. It would have been obvious to one of ordinary skill in the art to have used trunk pipelines in Vowles et al. and Lappen et al. in order to arbitrarily select gas inlets and outlets in accordance with request and in order to facilitate maintenance as taught by Moriya et al.

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22. With respect to claim 4, Vowles et al. and Lappen et al. disclose the apparatus substantially as claimed and as described above.

23. However, Vowles et al. and Lappen et al. fail to disclose the primary side connection unit and the flow rate control unit are hermetically enclosed by the gas box.

24. Moriya et al. disclose hermetically enclosing the structures of within the gas box (e.g. a primary side connection unit and a mass flow control unit) for the purpose of preventing a gas from leaking outside the casing (see, e.g. column and column 5, rows 49-57).

25. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the primary side connection unit and the flow rate control unit in Vowles et al. and Lappen et al. hermetically enclosed by a casing of the gas box in order to prevent gas from leaking outside the casing as taught by Moriya et al.

26. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vowles et al. and Lappen et al. as applied to claims 1, 3 and 5-8 above, and further in view of U.S. Patent No 6,578,600 to Young, Jr.

27. With respect to claims 9 and 10, Vowles et al. and Lappen et al. disclose the apparatus substantially as claimed and as described above.

28. However, Vowles et al. and Lappen et al. fail to disclose each of the gas supply systems is provided with switching valves for opening and closing respective gas lines, and the apparatus further comprises a remote control mechanism for concurrently



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closing the switching valves through a remote control operation, wherein each of the switching valves is a valve operated by air pressure and kept closed when no air pressure is applied thereto, and the remote control mechanism is a lock-out valve disposed on a common upstream line through which air is supplied to the switching valves.

29. Young, Jr. discloses the provision of pneumatic switching valves (see, e.g., Figures 6 and 7) and a remote control lock-out mechanism (Figure 2, 44) for a gas supply system for the purpose of disabling gas flow (see, e.g., column 3, rows 25-31; column 5, rows 27-32 and column 7, rows 41-46).

30. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided pneumatic switching valves and a remote control lock-out mechanism in the gas supply system of Vowles et al. and Lappen et al. in order to disable gas flow as needed as taught by Young, Jr.

### ***Response to Arguments***

31. Applicant's arguments filed 14 April 2010 have been fully considered but they are not persuasive.

32. Applicant argues that the mass flow controller of Kaveh is not disposed above the manual shut-off valve of Kaveh and does not partially overlap the manual shut off valve. Examiner disagrees. As seen in Fig. 2 of Kaveh, each of the mass-flow controller and the manual shut-off valve comprise a plurality of structures, wherein at least some of the structures of the mass flow controller are disposed above at least

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some of the structures of the manual shut off valve such that there is also partial vertical overlap between the two structures and thus reading in the recitation at issue.

33. With respect to claims 5 and 6, where Applicant has argued that the cited references fail to provide motivation or reason to locate an outer portion of a flow rate control unit out of a plan view contour of a corresponding processing chamber, where Examiner had stated that the mere rearrangement of parts which does not modify the operation of a device is prima facie obviousness, Examiner responds by first noting that Applicant has not shown a criticality of such an arrangement. Therefore, the rejection remains proper. Further, one of ordinary skill in the art exercising ordinary creativity, common sense and logic would recognize that positioning any part of the apparatus of Kaveh et al. at (or any other prior art reference) such that it is outside plan-view of a structure located thereabove, would allow for easier access thereto.

### ***Conclusion***

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA MOORE whose telephone number is (571)272-1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Karla Moore/  
Primary Examiner, Art Unit 1716